AAS HISTORICAL ASTRONOMY DIVISION (HAD) ANNUAL REPORT

Terry D. Oswalt, Chair

March 24, 2023

Officers

An election to choose a new Vice-Chair and two Committee Members-at-Large was held in October 2022. J. Allyn Smith is the new HAD Vice Chair. Terry D. Oswalt (Embry-Riddle Aeronautical University) assumed the duties of HAD Chair and Kevin Krisciunas (Texas A&M, Emeritus) became HAD Past Chair at the January 2023 AAS meeting during the special HAD Town Hall session. Kenneth Rumstay (Valdosta State University, Emeritus), continued as Secretary-Treasurer. In addition, Loretta J. Cannon and Stephen P. Marin were elected HAD Executive Committee members. Our Division's webpage has been updated to reflect these changes.

HAD expresses its sincere appreciation to the following officers whose terms expired in January 2023: previous Past Chair Alan Hirshfeld (U. Mass. Dartmouth) and Committee Members-at-Large Amy C. Oliver (NRAO) and Samantha Thompson (National Air & Space Museum). We encourage all of them to remain actively engaged in HAD's activities.

Finances

A summary of the HAD financial accounts over the most recent three fiscal years is given in Table 1. The balance over all three HAD subaccounts declined by 12.5% this year, largely due to downturns in the investment markets. Note that the balances increased between 2021 and 2022, largely because the stock markets were healthy, but also because the pandemic precluded in-person meetings, so no travel expenses for invited speakers were incurred. See Appendix 1 for a detailed financial statement prepared by HAD Secretary-Treasurer Rumstay and AAS CFOO Kelly Clark. An audited financial report for 2022 will appear in the forthcoming Spring 2023 issue of *HAD News*.

Over 30 charitable contributions to HAD from individuals were received during 2022. In addition, Don Osterbrock's heirs continued to donate royalties from his books to the Osterbrock Book Prize Fund.

Despite the downturn in the investment funds, HAD annual dues will continue to be \$15 for AAS members and \$20 for Division Affiliates. Dues will continue to be waived for emeritus, junior, and graduate student members.

TABLE 1.
Three-Year Summary of the HAD Budget

Balance as of January 1st	2021	2022	2023
HAD Operating Account	\$36,952.63	\$46,653.70	\$41,714.24
LeRoy E. Doggett Prize Fund	\$51,385.62	\$57,252.03	\$46,674.93
Donald E. Osterbrock Prize Fund	\$41,224.53	\$45,955.51	\$42,699.34
Total:	\$129,562.78	\$149,861.24	\$131,088.51

Membership

Secretary-Treasurer Rumstay tracks the HAD membership. As of March 14, 2023, there were 597 active members. A breakdown of membership classes is shown in Table 2. The strong positive trend over the last several years shown in Figure 1 is largely due to increasing numbers of emeritus members, students and amateurs astronomers. Our favorable dues structure probably contributes significantly to attracting new members. In the coming year we will seek to more fully engage them in HAD activities.

TABLE 2. HAD Membership as of December 31, 2022

		_		
#		Member Classification		
171	F	AAS Full Member		
145	Е	AAS Full Emeritus Member		
94	GR	AAS Graduate Student Member		
95	JR	AAS Undergraduate Student Member		
33	AM	AAS Amateur Affiliate		
21	HAD	HAD Division Affiliate only		
25	ED	AAS Educator Affiliate		
2	DA	Division Affiliate (two or more divisions)		
5	IA	AAS International Affiliate		
4	Staff	AAS staff member		
1	P	AAS Patron Member		
1	SPS	SPS Member (?)		

597 TOTAL MEMBERS

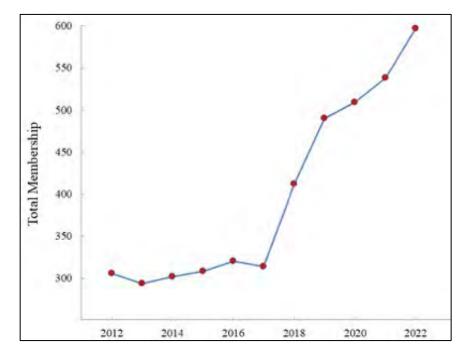


Figure 1. HAD membership, 2012 - 2022

Meetings

Due to the cancellation of the January 2022 in-person Salt Lake City meeting, most HAD sessions were rescheduled for the June 2022 AAS240 meeting in Pasadena. In lieu of a special session in Salt Lake City on the music and early career of William Herschel, a three hour online session organized by HAD Chair Woody Sullivan, "New Views on William Herschel (1738-1822)," was held on March 5, 2022.

The June AAS240 in Pasadena was a hybrid meeting. Vice Chair Terry Oswalt, attending via Zoom, represented HAD at the AAS Strategic Plan meeting on June 12th just prior to the general meeting. A summary of this discussion was shared with the HAD membership in the HAD News No. 100 (October 2022). HAD sessions were held on Tuesday, June 14th and Wednesday, June 15th. The full meeting schedule and abstracts are available on the HAD AAS240 website. The HAD Town Hall was held Wednesday June 15th. Eleven HAD members (including Chair Krisciunas and Secretary-Treasurer Rumstay) were present, with another ten virtual attendees (including Vice Chair Oswalt). The usual summaries on HAD membership, financial state and updates on HAD activities such as AAS obituaries, were presented. A moment of silence recognized those AAS members who had passed away during the past year. Thanks were also extended to HAD donors. One outcome of our general discussion is that HAD's annual reports to the AAS will be archived on our website. That evening HAD continued a tradition of meeting for dinner (the HAD "minibanquet"), this time at a nearby Mexican restaurant.

The January 2023 AAS241 in Seattle began at the AAS Strategic Assembly, chaired by AAS President Kelsey Johnson on Sunday, January 8th. Kevin Krisciunas represented HAD. Jennifer Bartlett kicked off the AAS241 HAD sessions with a discussion of the Working Group on the Preservation of Astronomical Heritage's (WGPAH) efforts to find and preserve documents such as editorial records of the Astrophysical Journal. Thomas Hockey introduced an initiative to establish a committee on the preservation of historic astronomical sites such as the microwave horn with which Penzias and Wilson discovered the cosmic microwave background. A full slate of very interesting talks completed the afternoon WGPAH splinter session. That evening, Barbara and Woody Sullivan (who reside in Seattle) graciously hosted a dinner party for the HAD officers and a few friends. The high point of the evening was a tour of Woody's home study, the ceiling of which is a custom-painted sundial fed by reflected sunlight from his window. Day two of our HAD meeting (Monday January 9th) was again filled with lively talks, culminating in the HAD Town Hall, during which outgoing HAD Chair Kevin Krisciunas passed the HAD gavel over to incoming HAD Chair Terry Oswalt. That evening, the traditional HAD "minibanguet" was convened at the Elephant & Castle, a few blocks from the convention center. Between sessions on both days, we informally kicked around ideas for new initiatives, such as whether HAD might cosponsor special sessions with other AAS Divisions devoted to their special histories. Ways we might better engage the growing number of student and early career HAD members were also discussed.

Publications

The newsletter of the Historical Astronomy Division, *HAD News*, continued to be published and archived online. The Spring 2022 and Fall 2022 issues are edited by HAD Secretary-Treasurer Ken Rumstay.

Each month since 2016, HAD provides for the *AAS News Digest* a peer-reviewed "This Month in Astronomical History" (TMIAH) column. Michael Marotta, an amateur astronomer affiliated with the Astronomical League, continued as TMIAH Editor. He is responsible for soliciting submissions, providing guidance to authors throughout the editorial process, editing their work to conform to the division's strict standards of publication, and coordinating the peer review of manuscripts by members of our division. This year, contributors included AAS editor emeritus Richard Fienberg, NRAO and ALMA publicist Amy Oliver, and Central Connecticut University professor Kristine Larsen. Returning to the

column were retired high school mathematics teacher Stephen Spears and medical doctor Alan Agrawal.

The following TMIAH articles were published during 2022:

- January: Strange Comet: William Herschel, His Telescopes, and Uranus by Amy Oliver
- February: 'Abd al-Rahman al-Sufi by Aneka Kazlyna
- March: Planets Have Rings by Michael Marotta
- April: The First Lady of Harvard's Observatory Hill: Cecilia Payne-Gaposchkin by Stephen Spears
- May: The First Telescope on the Moon by Richard Tresch Fienberg
- June: Scorpius X-1 and the Launch of X-Ray Astronomy by Michael E. Marotta
- July: <u>Reading Isaac Newton's Rare Manuscripts: The Making of Newton's Principia Mathematica (1687)</u> by Aneka Kazlyna
- August: Caroline Herschel's August Historiography by Michael E. Marotta
- September: The Drapers' First Photograph of Messier 42 by Michael Marotta
- October: The Discovery of Helium Alan Agrawal
- November: <u>Lunokhod 1 The First Extraterrestrial Rover Kenneth Rumstay</u>
- December: Problems in Astrophysics (1903) by Agnes Mary Clerke by Michael Marotta

The HAD website (https://had.aas.org/) contains:

- Titles and abstracts of talks presented at HAD meetings
- An archive of all past issues of the *HAD News*
- Links to obituaries of AAS members and a list of needed obituaries
- An archive of *This Month in Astronomical History* articles
- links to important resources related to the history of astronomy

Prizes

HAD continued to administer two endowed prizes. The *Leroy E. Doggett Prize* is given in even years to recognize lifetime achievement in the history of astronomy field. The *Donald E. Osterbrock Book Prize*, given in odd years, recognizes the best book published in the history of astronomy during a three-year period.

At the June 2022 AAS240 meeting in Pasadena, the 2022 LeRoy E. Doggett Prize was awarded to William H. Donahue from St. John's College in Santa Fe, New Mexico, who gave a plenary talk "The Most Fascinating Piece of Paper in the Universe." Bill traced the course of Johannes Kepler's notes and logic that lead to his realization that Mars' orbit must be elliptical in shape.

At the January 2023 AAS241 meeting in Seattle, R. Peter Broughton, author and former president of the Royal Astronomical Society of Canada, was awarded the 2023 Donald E. Osterbrock Book Prize for Historical Astronomy. His book "Northern Star – J.S. Plaskett." is a definitive biography of John Stanley Plaskett, Canada's best-known astronomer of the early 20th century. Broughton gave a plenary talk "Meet the Neighbors: J.S. Plaskett and Other Canucks" summarizing the state of astronomy in Canada in the late 19th and early 20th centuries.

AAS Member Obituaries

Per HAD by-laws, Vice-Chair Terry Oswalt was responsible for soliciting obituaries of deceased AAS members in 2022. AAS obituaries are published on the BAAS website, which contains a link to a list of Needed AAS Member Obituaries. For the past several years, AAS obituaries have also been indexed by the NASA Astrophysics Data Service and, whenever possible, linked to the AAS-sponsored Astronomy Genealogy Project site managed by HAD member Joe Tenn.

Figure 2 displays the publication rate of AAS obituaries over the past decade. During this period, an average of ~30 obituaries were published each year and the "needed obituary list" grew to well over 100 names. We have made a strong effort to address this backlog. In 2022, almost 100 new obituaries were published (over three times the annual rate). At the end of the year, about two dozen more were in various stages of preparation by authors. This year we surpassed a cumulative milestone of 800 published obituaries.

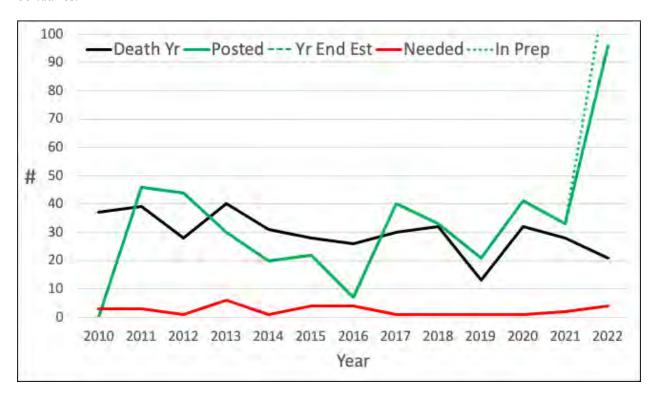


Figure 2. Distribution of AAS obituaries during the last decade. Black curve: number of AAS member deaths reported each year. Green curve: number of AAS obituaries published each year. Red curve: number of "needed obituaries" by year of death. Dashed green curve: obituaries in various stages of preparation at the end of 2022.

The "needed obituary" list has consistently been heavily populated by the names of colleagues who died more than five years ago. This year we gave these long-overdue obituaries high priority. Figure 3 shows the result. Roughly half of all AAS obituaries published this year were for colleagues who died five or more years ago.

Figure 4 shows the status of the "needed obituaries" list at the end of 2022. Red bars indicate the number of needed obituaries by year of AAS colleagues' year of death. Attached green bars indicate pending obituaries, i.e., those with assigned authors. The difference between the red and green bars represents about 35 names that lack an assigned author (also, the area under the red curve in Figure 2). The current "missing obituary" list has been reduced to about a third of what it has averaged over the last decade.

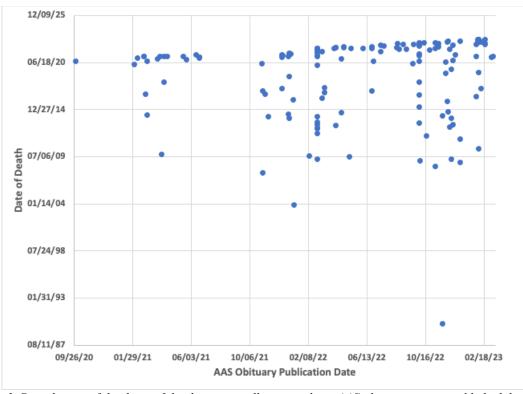


Figure 3. Distribution of the dates of death among colleagues whose AAS obituaries were published during the period September 2020 to February 2023.

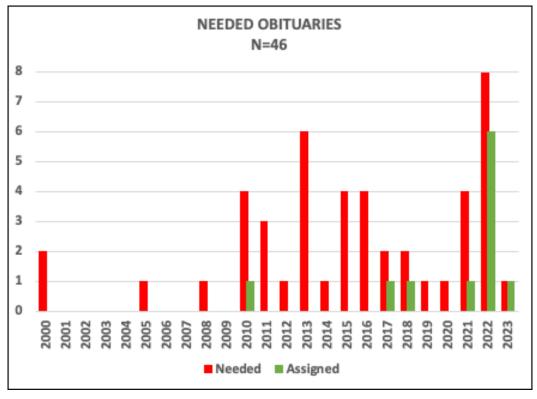


Figure 4. Status of the "missing AAS obituary" list. Red bars indicate the number of needed obituaries by AAS colleagues' year of death. Attached green bars indicate the subset with pending obituaries (assigned authors).

The HAD obituary program was recently highlighted by the American Institute of Physics. Corinne Mona, AIP Assistant Librarian, authored "For a Tribute and for History: The History of the AAS Astronomy Division's Obituary Program," for the AIP History Newsletter. The article was also posted, with permission, in the AAS Digest and it will also be reproduced in the spring 2023 HAD News. HAD Vice-Chair Oswalt and HAD member Steve Dick contributed material to this project, which we hope will encourage more AIP-affiliate members to contribute obituaries for colleagues who have passed on.

For further information or to volunteer to write an obituary of a deceased AAS colleague, please contact the new HAD Vice-Chair J. Allyn Smith (smithj@apsu.edu).

HAD Student Travel Award

Per our bylaws, HAD may sponsor one or more travel awards to undergraduate and/or graduate students to present at the winter AAS meeting. No requests for travel support were received in 2022.

HAD Standard Operating Procedures

At the request of the AAS Council, this year Divisions were requested to create or update existing Standard Operating Procedures (SOP) documents, whose primary purpose is to provide guidance to new Division officers on their responsibilities and the procedures by which we operate. Thanks to HAD Secretary-Treasurer Rumstay, who authored our SOP. The approved document will be archived on our HAD Executive Committee web page.

AstroGen

The Astronomy Genealogy Project (AstroGen) celebrated its 10th anniversary as a HAD project in January 2023. It has been online since July 25, 2020, courtesy of the AAS, which provides the website and funds the programmer. The database now includes more than 42,000 people, including over 36,000 with astronomy-related doctorates. The others are included because they supervised astronomy-related thesis research. Thirty-seven countries are now deemed "nearly complete."

AstroGen project director Joseph S. Tenn presented a contributed talk at AAS240 in Pasadena on the languages used in theses over time, tracing the progression from all Latin in the mid-19th century through national languages for most of the 20th and then to English for most theses in a number of countries. Sherry Winkelman, then Chief Archive Specialist at the Chandra X-ray Center, and Tenn presented an iPoster at the Pasadena meeting on her use of AstroGen to compile the Chandra Bibliography Search, showing that more than 1000 Ph.D. theses had made use of Chandra data. For more on AstroGen, see Tenn's iPoster from AAS Meeting #241.

Submitted March 24, 2023, by Terry D. Oswalt, Chair, AAS Historical Astronomy Division, Embry-Riddle Aeronautical University, terry.oswalt@erau.edu

APPENDIX 1. Financial Summary

	AMERICA	AN ASTRONOMIC	AL SOCIETY						
Historical Astronomy Division For the Twelve Months Ending Saturday, December 31, 2022									
		HAD	Doggett	Osterbrock					
		Gen. Acct EO	Prize	Prize					
		2401	2940	2942	Totals				
_	Revenue								
4000	Individual Dues	3,557.50			3,557.50				
4030	Contributions	1,595.00	656.00	3,033.56	5,284.56				
4401	Interest	678.27	838.38	668.14	2,184.79				
4402	Investment Expense Offset	(82.91)	(99.60)	(79.57)	(262.08)				
4404	Distributed Market Value	(6,901.20)	(8,530.29)	(6,797.91)	(22,229.40)				
	Total Revenue and Transfers	(\$1,153.34)	(\$7,135.51)	(\$3,175.78)	(\$11,464.63)				
	Expenses and Transfers								
5108	Printing	220.09			220.09				
5407	Service Charges	128.81	16.40	75.84	221.05				
5505	Non-Capitalized Equipment	327.35	10.10	70.01	327.35				
5605	General Mailing Charges	02/100	59.73		59.73				
5800	Domestic Travel	2,787.07	1,950.90		4,737.97				
5905	Prize Awards	2), 6, 16,	1,000.00		1,000.00				
5907	Prize Certificates		219.75		219.75				
8504	Transfer (Division Affiliate)	115.00	21717.0		115.00				
8506	Transfer for Admin Fee	207.80	194.81	4.55	407.16				
	Total Expenses and Transfers	\$3,786.12	\$3,441.59	\$80.39	\$7,308.10				
		(2102016)	(010 10)	(00.000.40)	(\$10.775.75)				
	Surplus/(Deficit)	(\$4,939.46)	(\$10,577.10)	(\$3,256.17)	(\$18,772.73)				
3000	Begining Balance (Yr.)	\$46,653.70	\$57,252.03	\$45,955.51	\$149,861.24				
	Ending Balance (Yr.)	\$41,714.24	\$46,674.93	\$42,699.34	\$131,088.51				
	% change:	-10.6	-18.5	-7.1	-12.5				
	CC Fees	128.81	16.40	75.84	221.05				
	Admin Fees	207.80	194.81	4.55	407.16				